RESTORING SALMON POPULATIONS
IN THE SACRAMENTO RIVER SYSTEM

www.thenigiriproject.org

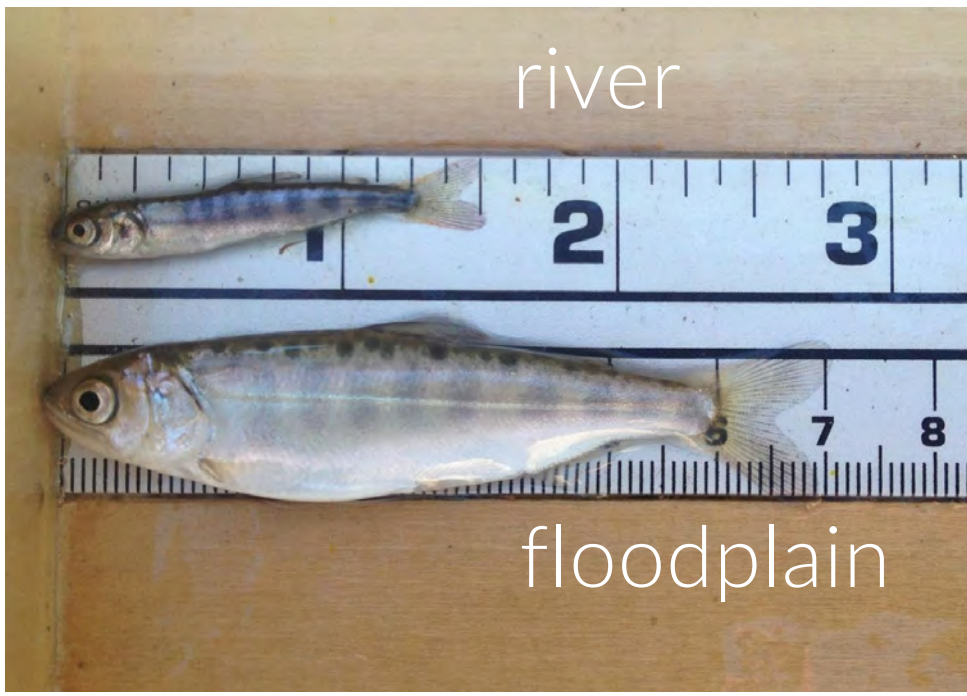
Nigiri 2.0

VISION

Our vision is to use refined, site-specific science to manage floodwaters on agricultural lands in order to maximize biological productivity to benefit salmon and other targeted species.

GOALS

1. Create inundated floodplain habitat in the upper Yolo Bypass to benefit juvenile Winter-run, Spring-run, and Fall-run Chinook salmon.
2. Build momentum to expedite implementation of the Yolo Bypass Salmonoid Habitat Restoration and Fish Passage Biological Opinion actions.
3. Enhance aquatic food web production to restore fish populations in the Sacramento River and Delta Ecosystems, specifically Delta smelt.



Comparing growth rates of two juvenile Chinook Salmon of the same age, reared in different environments.

The Nigiri Project
CAL MARSH & FARM VENTURES

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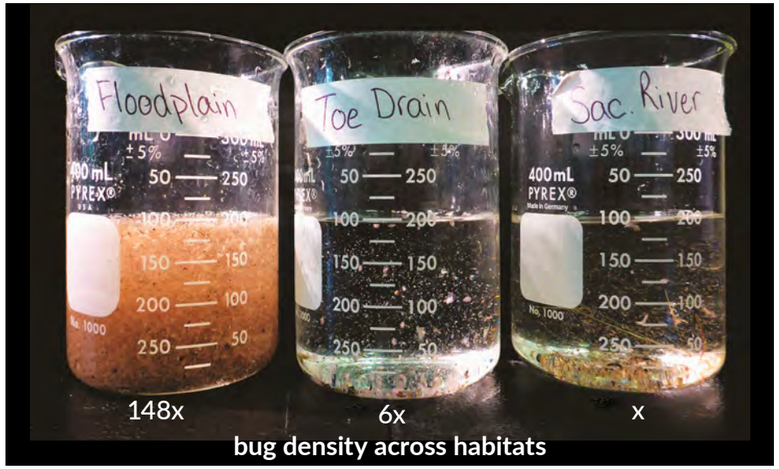
PROJECT SUMMARY

The Nigiri Project is located in the Sacramento Valley, in Yolo County, CA, east of Woodland, northeast of Davis, in the Yolo Bypass.

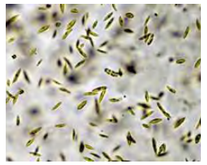
The Project creates approximately 8,000 acres of managed seasonal wetland habitat on agricultural lands. Construction of the project will include perimeter berms and water-control structures, allowing the area to be inundated by flows from the Colusa Basin Drain (via Knights Landing Ridge Cut Canal) or the Sacramento River via the Fremont Weir, the Fremont Weir Fish Ladder, or any of the proposed notch configurations. Inundation of the floodplain will occur during the late fall and winter months allowing for continued agricultural use of the property during the growing season. The area may be pre-flooded and maintained after a natural Fremont Weir overtopping event. The Project will mimic natural, shallow, long duration flood patterns and restore the ecological process that drives healthy and productive aquatic ecosystems.

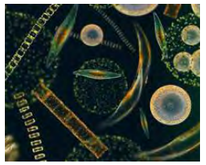


bug density across habitats

THE FOOD IS ON THE FLOODPLAIN


Cladocera

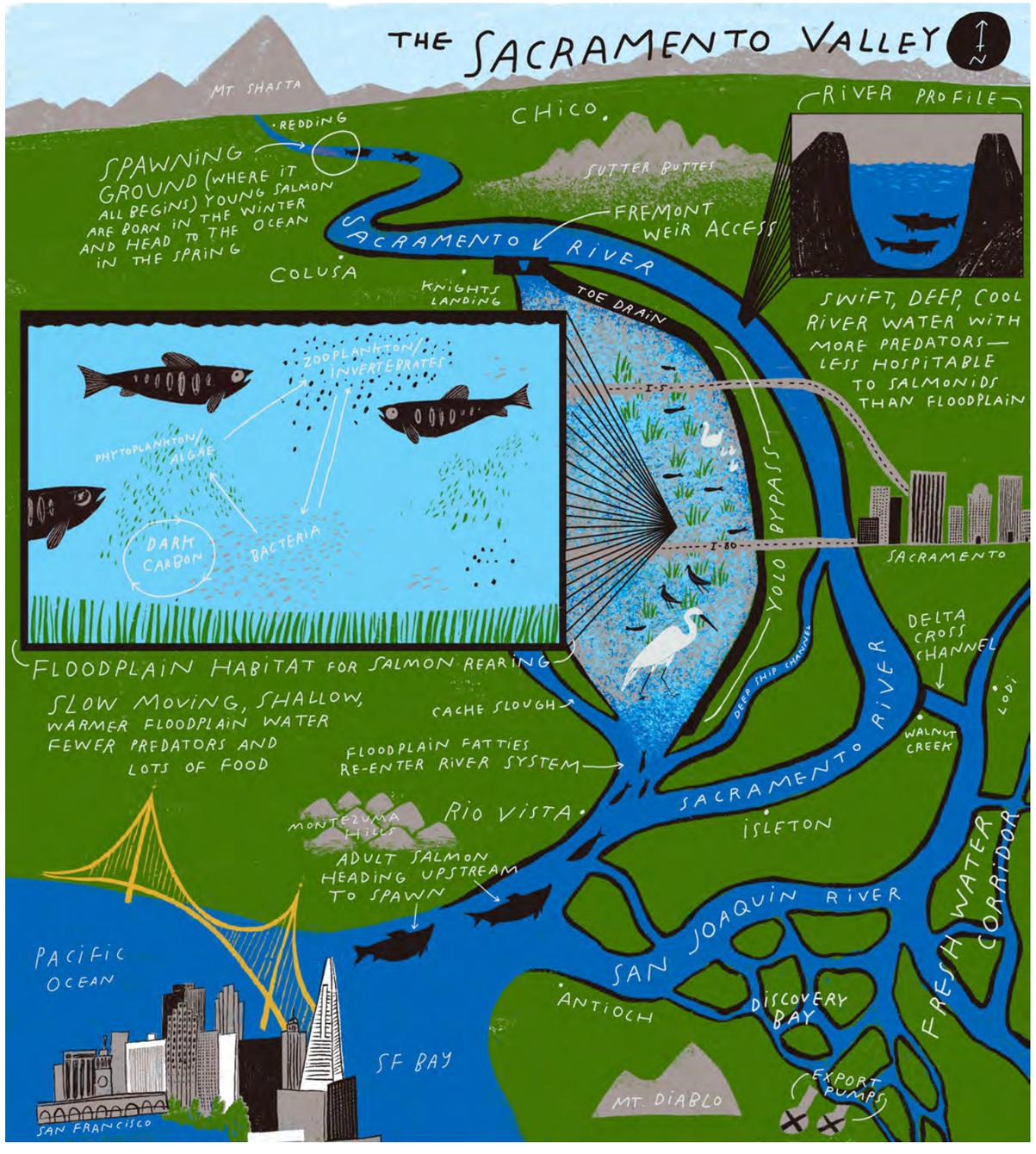

Algae


Phytoplankton

The Project creates critical floodplain rearing habitat for all runs of Salmon as well as producing annual export of food to the Delta, even in critically dry years, benefiting the Smelt populations in the Sacramento River and Delta ecosystems. Draining events will allow for the natural export of aquatic forage production to the Delta via the Tule Canal.

The Nigiri Project will provide volitional passage both on and off the floodplain for juvenile Salmon. The project will be operated in conjunction with Wallace Weir fish capture facility and the new enhanced fish passage ladder in Fremont Weir to optimize adult fish passage through the northern Yolo Bypass.

The Nigiri Project substantially enhances the performance of any alternative selected under the Yolo Bypass Salmon Habitat Restoration and Fish Passage actions under the Biological Opinion on the Long-Term Operations of the Central Valley Project and State Water Project.



PROJECT TIMELINE

2001 Section 7 Re-consultation

2009 Biological Opinions call for 17,000 acres of Salmon Floodplain Habitat

2010 Bay Delta Conservation Plan Forms/ Yolo Bypass EIR Begins

2011 Knaggs Purchase/ Cal Marsh & Farm Ventures Forms/ Nigiri Pilot Project Team Forms

2012 First Year of Science

2013 Second Year of Science

2014 Third Year of Science

2015 Fourth Year of Science

2016 Fifth Year of Science

2017 Sixth Year of Science
Rebuild Wallace Weir

2018 Seventh Year of Science
Notch in the Fremont Weir

2019 Nigiri 2.0 Group Forms/ Ag Crossings Improved

2020 TBD

2021 TBD

2022 TBD

ENDGOAL:
PERMANENT SALMON FLOODPLAIN HABITAT

BENEFITS

Improved Rearing Habitat: Provide high-quality floodplain habitat, rich in food resources that support the development, growth, and survival of salmon by extending inundation duration, increasing the number of continuous wetted acre-days and prolonging the residence time for production of more food. Extended access to more food enhances fish growth and increases survival to adulthood.

Enhanced Export of Aquatic Food Production: High densities of zooplankton and invertebrates are produced in shallow, inundated floodplains, becoming a vital food source for many freshwater fish: all runs of Salmon, Sacramento Splittail, Longfin Smelt, Delta Smelt, Green and White Sturgeon.

Migratory Waterbird Habitat: Migratory birds along the Pacific Flyway will benefit from winter water practices that generate varied depths of floodplain habitat at key times for multiple species of waterfowl, shorebirds, and wading birds.

Retain Farming for Flood Control: Agriculture is the only viable means of cost-effective vegetation control on the bypass. The Nigiri Project works with private ag businesses and landowners to ensure long-term viability of the Yolo Bypass flood control system.

Groundwater Recharge: Increased duration of water ponding in the Bypass will enhance infiltration into the groundwater basin.

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